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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/729,682      | 12/05/2003  | Ezzeddine Hilal      | S1022.81108US00     | 3164             |

23628 7590 03/16/2007  
WOLF GREENFIELD & SACKS, PC  
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600 ATLANTIC AVENUE  
BOSTON, MA 02210-2206

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| EXAMINER |
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TAKAOKA, DEAN O

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2817

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/16/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/729,682 | <b>Applicant(s)</b><br>HILAL ET AL. |  |
|                              | <b>Examiner</b><br>Dean O. Takaoka   | <b>Art Unit</b><br>2817             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 11-14, 16, 17 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 10, 15, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4, 7 – 9, 11 – 14, 16, 17 and 20 – 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohja (Reduced Size RF Coupler Design for Specialized Load Requirements), prior art cited in Applicant's IDS dated December 5, 2003.

Ohja shows a distributed coupler (abstract and where the elements are distributed elements) comprising first and second conductive lines (between ports 1 and the grounded port and between ports 2 and 3) as well as first and second capacitors with respective connections to the first and second conductive lines (capacitors and respective connections shown in Figs. 1 – 3; where the capacitor terminal connections or coupling to the terminals of the respective conductive lines are all interconnected). Ohja defines input at port 1 where the main signal travels from port 1 to the opposite grounded port. The signal is coupled to the second coupled conductive line to output ports 2 and 3 where the length from the coupled section of the second line along (Len 200 – Fig. 1 to either output) defines a second direction transverse to at least the coupled length of the first line shown as ( $L = 255$ ). Ohja in Fig. 2 additionally shows symmetrical first and second coupled lines, thus having the same length with same

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capacitor values. Ohja further explicitly teaches specific lengths of the first and second conductive lines which also correspond to response graphs such as shown in Figs. 4a-c and Figs. 5a-c, thus inherently comprising lengths smaller than approximately  $\lambda/4$ ; where the term "approximate" is broad where the limits are not defined by the claim, thus where the conductive lines of Ohja are smaller than approximately  $\lambda/4$ . The frequency response graphs in Figs. 4a-c and 5a-c are between the claimed range in claim 14.

### ***Response to Arguments***

Applicant's arguments, see page 7, filed February 9, 2007, with respect to the finality of the Office action dated November 3, 2006 have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

### ***Allowable Subject Matter***

Claims 5, 6, 10, 15, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O. Takaoka whose telephone number is (571) 272-1772. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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March 14, 2007